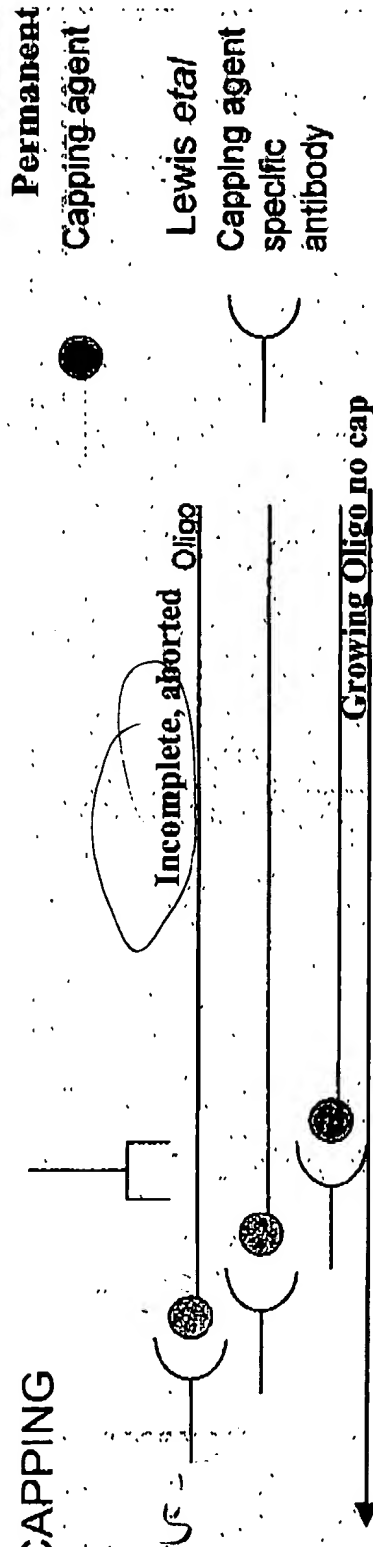


Capping and Protecting Group Technical Definitions

CAPPING



Capping agent blocks growing 5'-end of oligo in case of incomplete base addition during synthesis. Presence of capping agent in final oligo preparation doesn't relate to sidechain protecting group removal.

PROTECTING



Protecting groups block incorrect addition of bases on reactive sidechains of oligo during synthesis. Antibodies specific for capping group do not bind protecting groups and cannot detect impurities in oligonucleotide preparations with incomplete removal of sidechain protecting groups

prior to use for applications

1 OF 2

Sibley Jettay

Lewis et al. vs. Agris et al.

Lewis et al. uses the permanent capping groups on incomplete, aborted sequences

Permanent
Capping agent

Incomplete, aborted, oligos have
caps and protecting groups

Lewis et al.
Capping agent
specific
antibody

Growing Oligo has protecting
groups, but, no cap

Agris et al. uses the few protecting groups remaining after deprotection.
Protecting groups block biological function. Caps do not.

Removable
Protecting group

Agris et al.
Protecting-group-
specific antibody

Full length oligo after
deprotecting has some remaining
protecting groups, but no cap

bbs complete & incomplete

Seq

not come off

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